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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,207	10/22/2001	Phillip Hua-Kuan Wang	11001-2-US	2248
7590	11/15/2004			
Alfred N. Muartori 3724 Cora Drive Winston Salem, NC 27127			EXAMINER HUG, ERIC J	
			ART UNIT 1731	PAPER NUMBER

DATE MAILED: 11/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/045,207

Applicant(s)

WANG, PHILLIP HUA-KUAN

Examiner

Eric Hug

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

The following is in response to the amendment filed on August 30, 2004.

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Esser et al (US 4,994,679).

Esser discloses a method of measuring the eccentricity of a waveguide (optical fiber). Waveguide 7 (via connector pin 5 and mount 6) is clamped onto rotary table 2 having a mechanical axis of rotation 10. The waveguide is mounted so that its longitudinal axis 17 is coaxial with the mechanical axis of rotation. An optical transmitter is coupled to the lower end of waveguide 7. A sensor waveguide 11 which leads to an optical receiver is positioned above the upper end of waveguide 7. Through movement of waveguide 7, the optical axes of both waveguides are aligned. The optical axis of waveguide 7 may not be same as the longitudinal axis, and therefore not be aligned with the mechanical axis of rotation. When such a waveguide 7 is rotated about its longitudinal axis during optical alignment, the optical axis moves over a surface of a cone, as shown in Figure 3. By adjusting the angle between the longitudinal axis of waveguide 7 and the mechanical axis of rotation, the optical axis of waveguide 7 can be aligned with that of sensor waveguide 11. Adjusting the angle of the waveguide is equivalently a rotation about a second axis that is perpendicular to the mechanical axis of rotation. This can be seen in Figure 4. The movement of the angle position is done while maintaining the position of

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the end face (column 2, lines 44-56; column 4, lines 55-64). Therefore, there are two axes of rotation of waveguide 7, one about a longitudinal axis, and one perpendicular thereto, both intersecting at the fiber end.

### ***Response to Arguments***

Applicant's arguments filed August 30, 2004 have been fully considered and are persuasive. The prior art applied previously does not disclose or suggest a step of rotating an optical fiber about two axes that intersect at the end of the optical fiber. With respect to Green (US 6,470,120), the rotation of fibers is about eccentric axes, which impart a translational motion to the fiber end. The translational motion is designed to effect equivalent rotation of the fiber about the  $\theta_x$  and  $\theta_y$  axes. The fiber is not rotated about two axes that intersect at the fiber end. With respect to Jadrich (US 5,668,899), a lens is rotated through angles  $\theta_x$  and  $\theta_y$  to couple a beam to a fiber end. The fiber itself is not rotated. Therefore, all rejections presented previously have been withdrawn. However, a new grounds of rejection has been presented.

### ***Allowable Subject Matter***

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 is allowed.

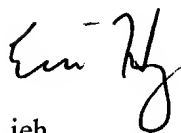
The following is a statement of reasons for the indication of allowable subject matter:

The claims are allowable for providing three axes of rotation about the fiber end.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
jeh